

I. Computer Memory

Lets look at computer memory first. The function of storage in a computer comes in many different sizes, types and shapes. However there are two basic categories: short-term memory and long-term memory. A typical computer contains numerous types of memory including RAM, ROM, virtual, cache, and various long-term storage devices. Each type of computer memory serves a specific function and purpose.

Computer memory is measured in bytes. A single byte is made up of a series of 1's and 0's normally traveling in pairs of eight. These eight 0's and 1's are the way the computer communicates and stores information. With each keystroke or character a byte of memory is used.

Bits & Bytes		
8 bits	=	1 byte
1000 bytes	=	1 kilobyte
1000 kilobytes	=	1 megabyte
1000 megabytes	=	1 gigabyte
1000 gigabytes	=	1 terabyte

II. ROM & RAM

ROM, or read-only memory is permanent, long-term, nonvolatile memory. Nonvolatile means it does not disappear when the computer is shut off. It also cannot be erased or changed in anyway. However there are types of ROM called PROM that can be altered. The P stands for programmable. ROM's purpose is to store the basic input/output system (BIOS) that controls the start-up, or boot process.




RAM, or random-access memory unlike ROM works only when the computer is turned on. This memory is vital to the computer because it controls the moment by moment processes of the computer. The first thing that goes into RAM is the OS (operating system) which includes Windows 98, Windows 2000 or Windows XP. Next for the RAM might be a game, or the Internet browser, or some type of software that you want to use.



RAM stick

Multitasking has put more demand on RAM in the past few years. Multitasking is the ability to run more than one program at the same time. For instance, many people like to run a web browser along with their word processing software. This means you need lots of RAM to hold both programs.






III. Storage Devices

Floppy disk	Hard disk drive
<p>A round plastic surface that is coated with magnetic film. They come in 3.5 inch size. They hold about 720 kB to 1440 kB of information. They typically are used to install new software, save, share, and/or copy files. Floppy drives are given letters. Commonly the floppy is A. If there is a second floppy drive it would be drive B.</p>	<p>A stack of round metal platters called disks encased in a metal air tight shell. They commonly range in sizes from 20 to 120 gigabytes (1000MB=1GB). The hard drive's function is to store all the files, and software the computer will ever use. Any file or software program used by RAM most likely will come from this drive. The hard drive is commonly lettered as the C drive.</p>
	
CD-ROM (Compact disk, read-only memory)	DVD-ROM (digital video disk, read-only memory)
<p>CD's function much like hard drive in that they store large amounts of memory. What separates them is their mobility and optical storage technology. Their storage capacity is also very limited compared to hard drives. They can only hold up to approximately 650 MB of information. The other big difference is that you have to have a special drive called a CD writer or burner to write to CD's. Otherwise they can only be read.</p>	<p>DVD's are similar to CD in that they are written and read by laser. Hard drives use magnetic currents store data. However CD's and DVD's use light (laser) to write and read data on a disk. These long and short pits are then stored or etched on the surface of the disk. They can only be read by laser technology. The new DVD technology increased the amount of memory a regular CD can hold. DVD's can range in sizes from 4.34GB (1000MB=1GB) to 7.95GB.</p>
	

IV. Input and Output Devices

A. Input

One of the best features of a computer is the ability to give the computer commands and feed it information. Without an input device this would not be possible. Input devices can be built into the computer or it can be connected to the computer by a cable. The most common input device is the keyboard. There are lots of others such as: mice, trackballs, touch pads, touch screens, pens, joy sticks, scanners, bar code readers, video and digital cameras, and microphones. In addition, storage devices such as disk drives can serve as input devices.

				
Mouse	Keyboard	Touch Screen	Digital Video Camera	Card Reader

B. Output

Input is important but equally important is the ability to read what the computer is doing. The computer output devices are used to serve the user. The most common output device is the monitor, or screen. However, most computers come with speakers and a printer which are excellent output devices. Storage devices such as disk drives and diskettes also serve as output devices when it is necessary to write new or updated data files to disk or tape.

				
Zip disk	Floppy disk	Monitor	Fax Machine	Printer

V. CPU

The brains of the computer is the microprocessor. The microprocessor is often referred to as the CPU (Central Processing Unit). The microprocessor is a chip the size of a postage stamp. The processor is the one part of the computer that is most important to the computer. The microprocessor controls how data is sorted and directs the flow of data.